

**PERSONAL INFORMATION**

Name **PAOLA NISTICO', MD**
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 Date of birth [REDACTED]
 Sex [REDACTED]
 Nationally [REDACTED]

WORK EXPERIENCE

2016 – present	Head of Tumor Immunology and Immunotherapy Unit, Regina Elena National Cancer Institute
2015 – 2016	Senior Researcher Group Leader, Department of Research, Advanced Diagnostic and Technological Innovation Translational Research Functional Departmental Area, Regina Elena National Cancer Institute
1987 – 2014	Senior Researcher Group Leader, Laboratory of Immunology, Dep. Experimental Oncology, Regina Elena National Cancer Institute
1983-1986	Fellowship Researcher, Laboratory of Immunology, Regina Elena National Cancer Institute

EDUCATION AND TRAINING

1984-1989	Postgrad Degree in Pathology – University Parma
1983	Qualification as a medical profession - University "Sapienza" Rome
1976-1983	MD summa cum laude - University "Sapienza" Rome

VISITING SCIENTIST

2012	Visiting Scientist, Lawrence Berkeley National Laboratory, Berkeley, CA, USA
2011	Visiting Scientist, Lawrence Berkeley National Laboratory, Berkeley, CA, USA
2010	Visiting Scientist, Lawrence Berkeley National Laboratory, Berkeley, CA, USA
2003	II Medizinische Klinik Hamatologie Onkologie, Krankenhaus Nordwest, Frankfurt, Germany
1999	Ludwig Cancer Institute at Memorial Sloan Kettering, New York, USA
1984	Dept Experimental Research, Memorial Sloan Kettering, New York, USA
1995	Medizinische Klinik und Poliklinik Johannes Gutenberg, University of Mainz, Mainz, Germany

PERSONAL STATEMENT

	<p>In the advancement of scientific knowledge in oncology, the major scientific accomplishments of the PI Paola Nistico to be cited: her dedication to the field of tumor immunology, focusing on the role of the host immune response in carcinogenesis and progression leading to the identification of mechanisms of control or evasion of the adaptive immune response in patients. In 1987, the PI and a pioneering group produced and characterized bispecific monoclonal antibodies (PNAS, JCI) and analyzed their functional activity to redirect the T cell response against cancer. She was the first to describe an HLA- and TCR/CD3-independent pathway mechanism that CD4 and CD8 T cell clones may utilize to recognize and kill breast tumor cells. Significantly, Dr. Nistico and her group have more recently identified from the antibody response of a long-surviving breast cancer patient, Mena, a cytoskeleton regulatory protein as well as different isoforms as biomarkers of invasion and metastases in breast, lung and pancreatic cancers. Four patents have been registered in this regard for the PI and her group, three at the Regina Elena Cancer Institution and one with her co-inventors from The Albert Einstein University of New York and MIT of Boston. Her appointment as coordinator of the Study Protocol for a Clinical Trial: "Peptide-based vaccine in combination or not with chemotherapy in melanoma patients: a phase II randomized clinical study", further testified to her important contribution in understanding the mechanisms involved in the cooperation between chemotherapy and immunotherapy. From data obtained by immune monitoring of this trial, her group has identified a novel CD8 lymphocyte polyfunctional subset CD28-/PD1+/P-AKT sustained by ICOS molecule and able to protect melanoma patients from tumor recurrence. The PI has been awarded honors. Her group has recently focused their research on the role of Mena isoforms in the composition of extracellular matrix and on the cross-talk among tumor, CAF and immune cells.</p>
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CLINICAL TRIALS

• 2016	Study coordinator Open label study of Immune monitoring of temoporfin mediated photodynamic therapy (PDT-Foscan) for the treatment of recurrent head-neck Multiple Non Melanoma Skin Cancer"
• 2009	Scientific coordinator Peptide-based vaccine in combination with chemotherapy in melanoma patients: a phase II randomized clinical study. Study code ISSDP11 Sponsor Istituto Superiore di Sanità
• 2004	Scientific coordinator Phase I/II Clinical Trial for the Evaluation of the Interaction Between Chemotherapy and Immunotherapy in Melanoma Patients (DTIC-melvacc). ClinicalTrials.gov Identifier: NCT00559026 Sponsor Istituto Superiore di Sanità

PAST GRANTS

	Principal Investigator (PI) Airc, Italian Ministry of Health, ISS, CNR grants
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CURRENT GRANTS

2018-2022	AIRC: "hMENA splicing in the dialogue between tumor, ECM, CAFs and immune cells: Role in NSCLC progression and drug-resistance"
2019-2020	AIRC 5X1000: "Clinically applicable biomarkers to early diagnosis, patient risk stratification and therapy response in pancreas cancer"
2018-2019	LAZIOINNOVA: "RevEr3mAb: un farmaco biologico innovativo per revertire la resistenza a terapie oncologiche convenzionali"

EDITORIAL BOARD

	Journal of Immunotherapy
• 2014-present	Associated Editor Journal of Immunology Research

TEACHING ACTIVITIES

• 2008- present	Member of the Teaching Committee of the PhD Program in Immunological Sciences University Sapienza, Rome, Italy
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SCIENTIFIC SOCIETIES

2018-present	Member of Network Italiano Biologia dei Tumori (NIBIT) Committee
2017-present	Responsible of pre-clinical studies of Immunotherapy WG launched by ACC - Alleanza Contro il Cancro- Rome, Italy
	Member Pancreatic Italian Network (PANIN)
	Member SIC, SIICA, CIMT, AACR, SITC

AWARDS AND HONORS

2008	Award Travel Leopoldina Academy of Science at First International Conference on Immunochemotherapy Paris, 17-18 October 2008
1993	Awarded SIC, Italian Society of Cancer Research

PATENT

	<ul style="list-style-type: none"> - Metastasis specific splice variants of Mena and uses thereof in diagnosis, prognosis and treatment of tumors. U.S. Patent Application n° 60/899,303 (2007) - Human Mena isoforms serve as markers of epithelial to mesenchymal transition and sensitivity to EGFR inhibition in human cancer cells. Publication number : EP23040512015-02-011 Publication number : US-2012/0028252A (2012) - New Markers for the epithelial and proliferative or mesenchymal invasive phenotype of human neoplasias. Publication number : EP2603603A2013-06-19 Patent number, date: US 9939423 (2018) - Nuovi marcatori prognostici e teranostici in oncoimmunologia Application Number 102017000142293.00 (2017)
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PERTINENT PUBLICATIONS LAST FIVE YEARS

Palermo B, Panetta M, Campo G, Nisticò P. A cytofluorimetric assay to evaluate T cell polyfunctionality. *Methods Enzymol.* 2020;631:61-76. doi: 10.1016/bs.mie.2019.07.041. Epub 2019 Aug 14. PubMed PMID: 31948567.

Bedognetti D, Ceccarelli M, Galluzzi L, Lu R, Palucka K, Samayoa J, Spranger S, Warren S, Wong KK, Ziv E, Chowell D, Coussens LM, De Carvalho DD, DeNardo DG, Galon J, Kaufman HL, Kirchhoff T, Lotze MT, Luke JJ, Minn AJ, Politi K, Shultz LD, Simon R, Thórsson V, Weidhaas JB, Ascierto ML, Ascierto PA, Barnes JM, Barsan V, Bommareddy PK, Bot A, Church SE, Ciliberto G, De Maria A, Draganov D, Ho WS, McGee HM, Monette A, Murphy JF, Nisticò P, Park W, Patel M, Quigley M, Radvanyi L, Raftopoulos H, Rudqvist NP, Snyder A, Sweis RF, Valpione S, Butterfield LH, Disis ML, Fox BA, Cesano A, Marincola FM; Society for Immunotherapy of Cancer (SITC) Cancer Immune Responsiveness Task Force and Working Groups. Toward a comprehensive view of cancer immune responsiveness: a synopsis from the SITC workshop. *J Immunother Cancer*. 2019 May 22;7(1):131. doi: 10.1186/s40425-019-0602-4.

Di Modugno F, Colosi C, Trono P, Antonacci G, Ruocco G, Nisticò P. 3D models in the new era of immune oncology: focus on T cells, CAF and ECM. *J Exp Clin Cancer Res*. 2019 Mar 22;38(1):117. doi: 10.1186/s13046-019-1086-2.

Palermo B, Franzese O, Donna CD, Panetta M, Quintarelli C, Sperduti I, Gualtieri N, Foddai ML, Proietti E, Ferraresi V, Ciliberto G, Nisticò P. Antigen-specificity and DTIC before peptide-vaccination differently shape immune-checkpoint expression pattern, anti-tumor functionality and TCR repertoire in melanoma patients. *Oncoimmunology*. 2018 Sep 11;7(12):e1465163. doi: 10.1080/2162402X.2018.1465163.

Di Modugno F, Spada S, Palermo B, Visca P, Iapicca P, Di Carlo A, Antoniani B, Sperduti I, Di Benedetto A, Terrenato I, Mottolese M, Gandolfi F, Facciolo F, Chen EI, Schwartz MA, Santoni A, Bissell MJ, Nisticò P. hMENA isoforms impact NSCLC patient outcome through fibronectin/ β 1 integrin axis. *Oncogene*. 2018 Oct;37(42):5605-5617. doi: 10.1038/s41388-018-0364-3.

Di Modugno F, Caprara V, Chellini L, Tocci P, Spadaro F, Ferrandina G, Sacconi A, Blandino G, Nisticò P, Bagnato A, Rosanò L. hMENA is a key regulator in endothelin-1/ β -arrestin1-induced invadopodial function and metastatic process. *Proc Natl Acad Sci U S A*. 2018 Mar 20;115(12):3132-3137. doi:10.1073/pnas.1715998115.

Sistigu A, Di Modugno F, Manic G, Nisticò P. Deciphering the loop of epithelial-mesenchymal transition, inflammatory cytokines and cancer immunoediting. *Cytokine Growth Factor Rev*. 2017 Aug;36:67-77. doi: 10.1016/j.cytogfr.2017.05.008.

Principe M, Borgoni S, Cascione M, Chattaragada MS, Ferri-Borgogno S, Capello M, Bulfamante S, Chapelle J, Di Modugno F, Defilippi P, Nisticò P, Cappello P, Riganti C, Leporatti S, Novelli F. Alpha-enolase (ENO1) controls alpha v/beta 3 integrin expression and regulates pancreatic cancer adhesion, invasion, and metastasis. *J Hematol Oncol*. 2017 Jan 13;10(1):16. doi: 10.1186/s13045-016-0385-8.

Melchionna R, Iapicca P, Di Modugno F, Trono P, Sperduti I, Fassan M, Cataldo I, Rusev BC, Lawlor RT, Diodoro MG, Milella M, Grazi GL, Bissell MJ, Scarpa A, Nisticò P. The pattern of hMENA isoforms is regulated by TGF- β 1 in pancreatic cancer and may predict patient outcome. *Oncoimmunology*. 2016 Aug 12;5(12):e1221556. doi: 10.1080/2162402X.2016.1221556.

Franzese O, Palermo B, Di Donna C, Sperduti I, Ferraresi V, Stabile H, Gismondi A, Santoni A, Nisticò P. Polyfunctional Melan-A-specific tumor-reactive CD8(+) T cells elicited by dacarbazine treatment before peptide-vaccination depends on AKT activation sustained by ICOS. *Oncoimmunology*. 2016 Feb 1;5(5):e1114203. doi: 10.1080/2162402X.2015.

Trono P, Di Modugno F, Circo R, Spada S, Di Benedetto A, Melchionna R, Palermo B, Matteoni S, Soddu S, Mottolese M, De Maria R, Nisticò P. hMENA(11a) contributes to HER3-mediated resistance to PI3K inhibitors in HER2-overexpressing breast cancer cells. *Oncogene*. 2016 Feb 18;35(7):887-96. doi: 10.1038/onc.2015.143.

Trono P, Di Modugno F, Nisticò P. hMENA(11a), a hMENA isoform sending survival signals. *Mol Cell Oncol*. 2015 Aug 27;3(2):e1083648. doi: 10.1080/23723556.2015.1083648.

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